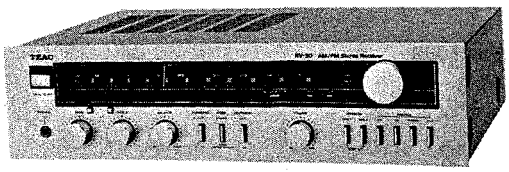
TEAC®



SERVICE MANUAL

RV-30

AM/FM Stereo Receiver

Effective: January 1982

5704011800

1 SPECIFICATIONS

Amplifier Section

Continuous Power Output 30W + 30W
Minimum RMS power per channel into 8 ohms from 20Hz to 20 kHz at rated T.H.D., both channels driven.

Total Harmonic Distortion
At rated power into 8 ohms, no more than 0.08%

Power Bandwidth (IHF) 15Hz–35kHz

Damping Factor (8 ohms) 25

Input Sensitivity/Impedance
PHONO 2.5mV/47k ohms
AUX 150mV/39k ohms
TAPE 1,2 150mV/39k ohms

Signal-to-Noise Ratio, IHF-A network
PHONO 80dB
AUX 95dB
TAPE 1,2 95 dB

Frequency Response
PHONO (RIAA), (20Hz to 20kHz)
±0.5dB
AUX, TAPE, (20Hz to 20kHz) ±1.0dB

Tone Controls
BASS ±9dB (70Hz)
TREBLE ±9dB (10kHz)

Output Level (TAPE OUT) 150mV

Loudness Control +10dB (70Hz)
+6dB (10kHz)

Subsonic Filter 30Hz, 6dB/oct.

FM Tuner Section

Tuning Range 87.5MHz–108MHz

Usable Sensitivity 6dBf/2μV
50dB Quieting Sensitivity
STEREO 34dBf
MONO 8dBf

Signal-to-Noise Ratio
STEREO 60 dB
MONO 70dB

Total Harmonic Distortion
STEREO 0.2%
MONO 0.1%

Frequency Response
(50Hz to 13kHz) +0.5dB, –1.0dB

Capture Ratio 1.5dB

Selectivity 55dB

Spurious Response Ratio 75dB

Image Response Ratio 50dB

IF Rejection Ratio 90dB

AM Suppression Ratio 50dB

Stereo Separation
1kHz: 40dB
100Hz to 10kHz: 30dB

Subcarrier Suppression 65dB

Antenna Impedance 75 ohms and 300 ohms

AM Tuner Section

Tuning Range 525kHz–1605kHz

Usable Sensitivity, BAR antenna 350μV

Selectivity 35dB

Signal-to-Noise Ratio 50dB

Image Rejection 40dB

IF Rejection 32dB

Total Harmonic Distortion 0.5%

General

Power Requirement
120V AC 60Hz, 52W (U.S.A.)
120V AC 60Hz, 0.95A (Canada)
220V AC 50Hz, 140W (Europe)
240V AC 50Hz, 160W (U.K./Australia)
110/120/220/240V, 50W
AC50/60Hz (General Export)

Dimensions
Width: 432mm, 17"
Height: 120mm, 4-3/4"
Depth: 371mm, 14-5/8"

Weight, without package 7.5 kg, 16.5 lbs

• Specifications and design are subject to change without notice.

CAUTION

⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components — refer to the TEAC parts list and ensure exact replacement.

2 DIAL CORD INSTALLATION

1. Remove the old dial cord.
2. Turn the dial drum shaft counterclockwise until the rotor of the variable capacitor is completely out of its stator. If the opening in the rim of the dial drum is not located immediately above the dial drum shaft, loosen the dial drum screw, correct the dial drum position, then retighten the dial drum screw.
3. String the dial drum and pulleys with a new dial cord as shown in Fig. 2-2.
4. Turn the tuning knob counterclockwise until the rotor of the variable capacitor is fully rotated into the stator. Then, attach the dial pointer to the string so that the pointer reading on the dial scale is as shown in Fig. 2-1.

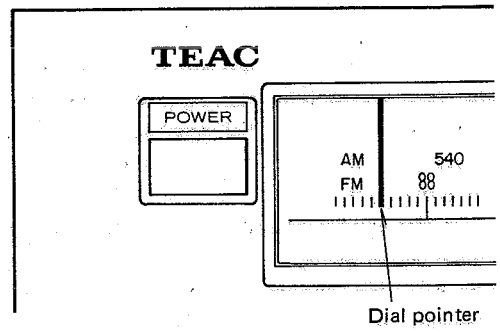


Fig. 2-1

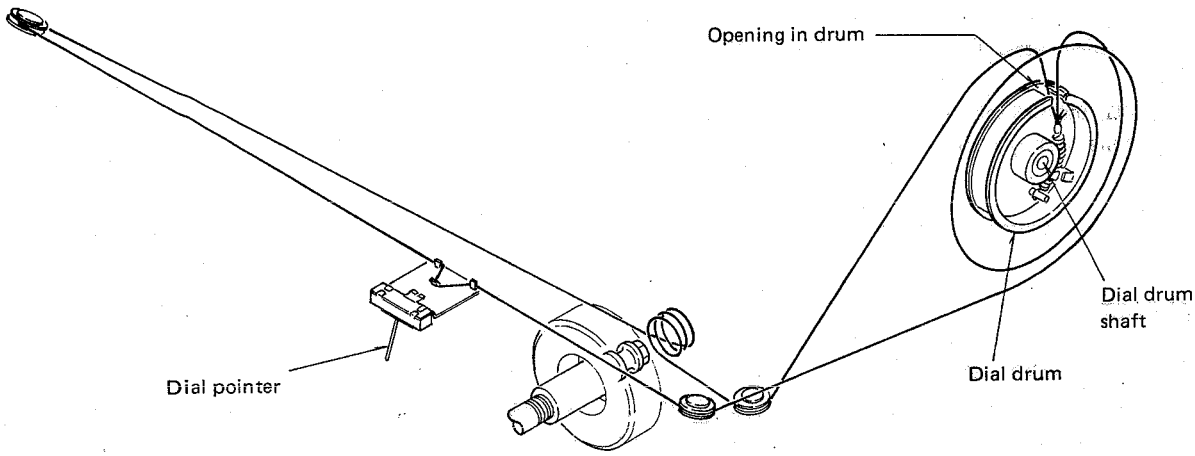


Fig. 2-2

3 VOLTAGE CONVERSION

(FOR GENERAL EXPORT MODELS ONLY)

WARNING: ALWAYS DISCONNECT THE POWER CORD BEFORE MAKING THIS ADJUSTMENT.

1. Turn the receiver upside down and remove the bottom panel by unscrewing the 10 retaining screws.
2. Locate the voltage selector by referring to the illustration.
3. Fit a regular screwdriver of appropriate dimensions into the slot in the voltage selector and turn it until the correct voltage indication is aligned with the voltage indication mark.
4. Replace the bottom cover and retighten the screws.

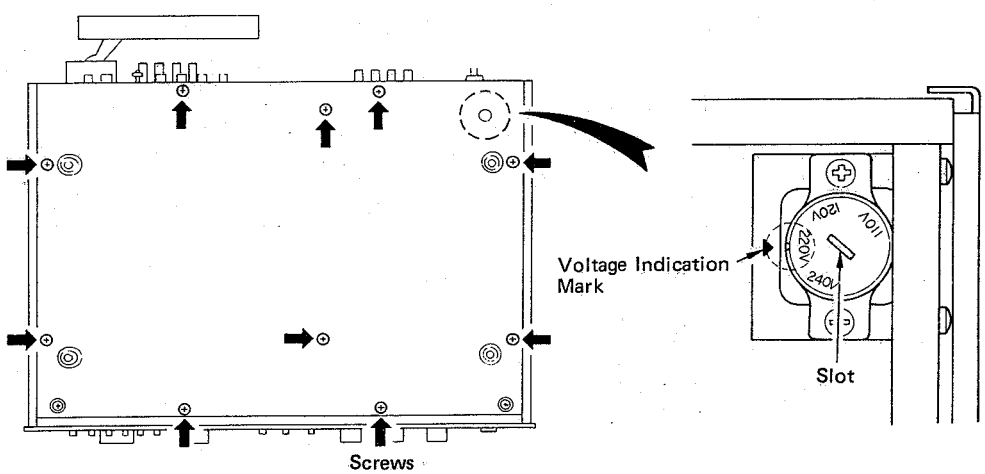


Fig. 3-1

4 ALIGNMENT

4-1 GENERAL NOTES:

1. 0dB is referenced to 1μV.
2. Make sure that the RV-30 is properly set for the voltage in your locality. If not, correct it by referring to section 3.
3. Before connecting an AM or FM signal generator to the RV-30, disconnect any AM and/or FM antennas attached to the set to prevent testing error.
4. Allow the test equipment and RV-30 to warm up for at least 10 minutes before testing.
5. Turn the VOLUME controls all the way to the left when dummy load resistors or speakers are not connected to the speaker terminals.
6. Be sure to confirm that dial cord installation is correct before proceeding with section alignment.
7. No switch settings other than those specified in the charts are valid.
8. In the charts, instructions in the SETTING column are continued from previous steps unless indicated otherwise.

4-2 TEST EQUIPMENT

FM signal generator
Stereo modulator
AM signal generator
Test loop antenna
Impedance-matching network
Frequency counter
AC voltmeter
DC voltmeter
A differential voltmeter is preferable.
Oscilloscope
Distortion meter
AF oscillator

4-3 FM SECTION

NOTES ON CONNECTIONS AND CHART

The relationship between the output level indication (dB) of FM SG (signal generator) and the RV-30's antenna input power (dBf) with the setup shown in Fig. 4-1 is as follows:

A. When the FM SG level indicator shows the open-end output voltage (dB)
dBf = FM SG level indication – 6.8 dB
FM SG level indication (dB) = dBf + 6.8 dB

B. When the FM SG level indicator shows the matched-end output voltage (dB)
dBf = FM SG level indication (dB) – 0,8 dB
FM SG level indication (dB) = dBf + 0.8 dB

The FM section chart below applies the principle stated in A. So, for example, if the FM SG level indication is 72 dB, antenna input power becomes 65.2 dBf.

Note: In case that DC voltmeter needle swings backwards when making adjustments, simply reverse the voltmeter connections.

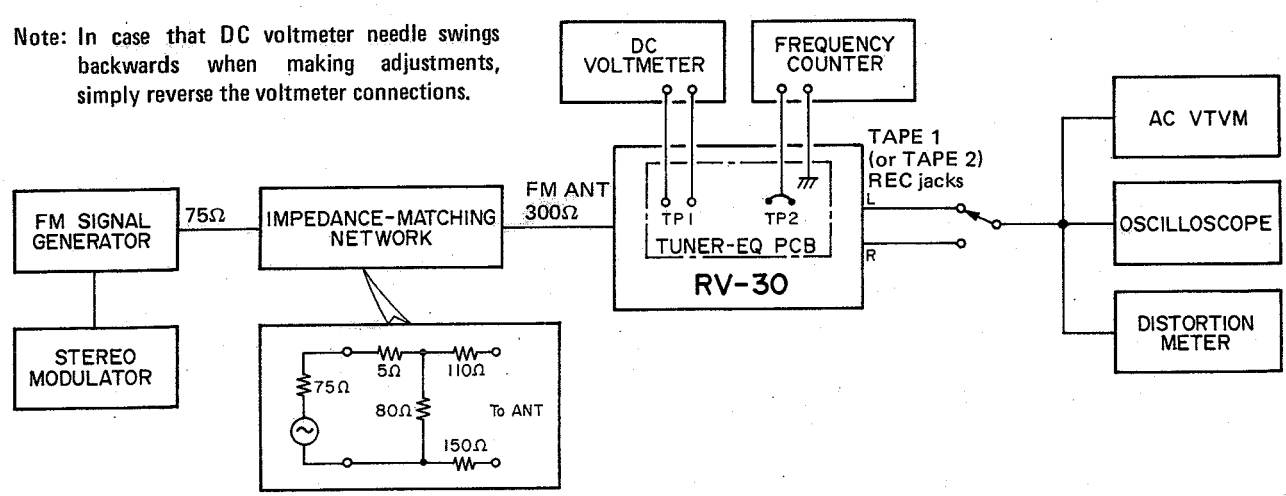


Fig. 4-1 Test setup for FM section alignment

RV-30 initial settings: SOURCE sw: FM
MODE sw: Designated in the chart.

ITEM		SETTING	ADJUSTMENT POINT	MEASURING POINT	ADJUSTMENT
1. FM-IF	1-1	• FM SG: No signal • RV-30: MODE sw: MONO	T101	Between TP1 terminals	DC voltmeter: 0V
	1-2	• FM SG: Freq.: 98 MHz Modulation: 1kHz/mono [±75 kHz] Level indication: 72 dB (3981 μV) (RV-30 ANT input: 65.2 dBf) • RV-30: Tune to 98 MHz.	T102	TAPE 1 (or TAPE 2) REC jacks	Minimum distortion
	1-3	Repeat steps 1-1 and 1-2 until distortion can be reduced no further.			
2. FM muting	2-1	• FM SG: Freq.: 98 MHz Modulation: 1 kHz/mono [±75 kHz] Level indication: 42 dB (126 μV) (RV-30 ANT input: 35.2 dBf) • RV-30: MODE sw: STEREO Tune to 98 MHz.	R116	TAPE 1 (or TAPE 2) REC jacks	Adjust until audio output can no longer be observed on oscilloscope.
	2-2	• RV-30: Detune from 98 MHz slightly in both higher and lower directions	Check		Output should disappear before wave becomes distorted.
3. SIGNAL indicator	3-1	• FM SG: Freq.: 98 MHz Modulation: 1 kHz/mono [±75 kHz] Level indication: 42 dB (126 μV) (RV-30 ANT input: 35.2 dBf) • RV-30: MODE sw: STEREO Tune to 98 MHz.	R928	SIGNAL indicator	Adjust so that the indicator lights up.
	3-2	• RV-30: Detune from 98 MHz.	Check		The indicator should go out.
4. FM frequency coverage	4-1	Make this adjustment after confirming that the dial pointer is correctly fixed to the dial cord (refer to section 2).			
		• FM SG: Freq.: 108 MHz Modulation: 1 kHz/mono [±75 kHz] Level indication: 72 dB (3981 μV) (RV-30 ANT input: 65.2 dBf) • RV-30: MODE sw: MONO Dial pointer: 108 MHz	TC3	Adjustment should satisfy both 1) and 2). 1) TAPE 1 (or TAPE 2) REC jacks 2) Between TP1 terminals	. . . AC voltmeter: max. deflection . . . DC voltmeter: 0V
5. FM tracking	5-1	• FM SG: Freq.: 88 MHz Modulation: 1 kHz/mono [±75 kHz] Attenuate for response with 3% distortion. • RV-30: MODE sw: MONO Tune to 88 MHz.	L2 L4	TAPE 1 (or TAPE 2) REC jacks	Maximum output with min. distortion
	5-2	• FM SG: Freq.: 108 MHz Attenuate for response with 3% distortion. • RV-30: Tune to 108 MHz.	TCA TCR		
	5-3	Repeat 5-1 and 5-2 until both outputs are almost equal.			

ITEM		SETTING	ADJUSTMENT POINT	MEASURING POINT		ADJUSTMENT
6. FM separation	6-1	• Stereo modulator: Pilot: 10% (±7.5 kHz) L + R (MAIN): 90% (±67.5 kHz) Modulation frequency: 1 kHz/stereo				
	6-2	• FM SG: Freq.: 98 MHz Modulation: Unmodulated carrier Level indication: 72 dB (3981 μV) (RV-30 ANT input: 65.2 dBf) • RV-30: MODE sw: STEREO Tune to 98 MHz.	R316	Between TP2 and ground		Frequency counter: 76 kHz (±0.1 kHz)
	6-3	• FM SG: MODULATION sw: EXT. • Stereo modulator: OUTPUT MODE sw: L + R (MAIN)	Check			Frequency counter: to be stabilized at 76 kHz.
	6-4	• Stereo modulator: OUTPUT MODE sw: L	R313	TAPE 1 (TAPE 2) REC jacks	R-ch	Minimize 1 kHz leakage of R-ch. (ratio of 40 dB or better)
	6-5	• Stereo modulator: OUTPUT MODE sw: R			L-ch	Minimize 1 kHz leakage of L-ch. (ratio of 40 dB or better)
	6-6	Repeat 6-4 and 6-5 until separation is almost even.				
7. Stereo distrotion	7-1	• After finishing 6-6, continue by making this adjustment. • Stereo modulator: OUTPUT MODE sw: L-R (SUB)	T1	TAPE 1 (TAPE 2) REC jacks		Minimum distortion (0.25% or less)

4-4 AM SECTION

1. Pull the bar antenna out from the back of the RV-30 so that it is fully extended.
2. Place the test loop antenna at a distance of approx. 60 cm from the middle of the bar antenna as illustrated.

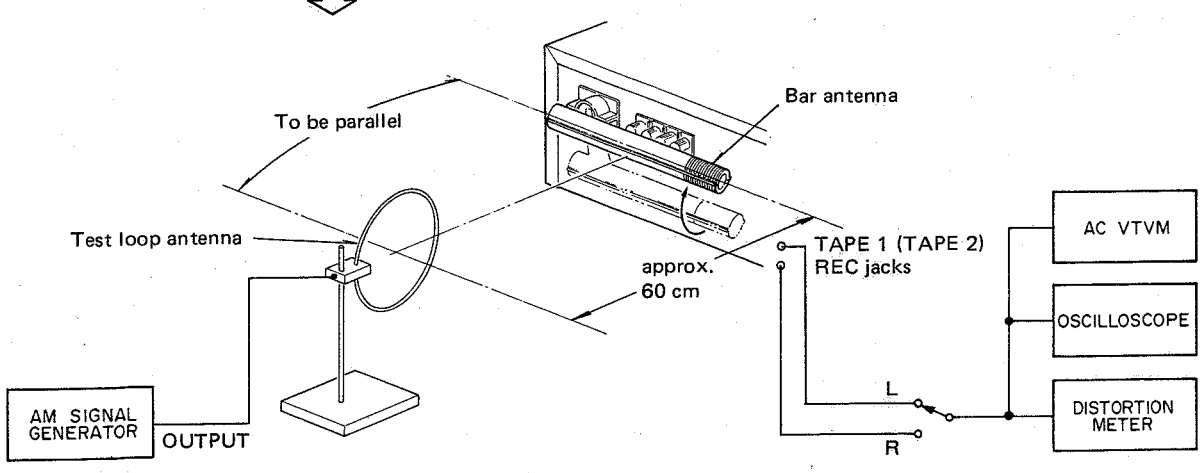


Fig. 4-2 Test setup for AM section alignment

RV-30 initial settings: SOURCE sw: AM
MODE sw: MONO

ITEM		SETTING	ADJUSTMENT POINT	MEASURING POINT	ADJUSTMENT
1. AM-IF	1-1	• AM SG: Freq.: 450 kHz Modulation: 1 kHz, 30% Level indication: 76 dB (6310 μV) • RV-30: Dial pointer: High frequency end of the dial scale	T202 T203	TAPE 1 (or TAPE 2) REC jacks	Maximum output
2. AM frequency coverage	2-1	• AM SG: Freq.: 520 kHz Modulation: 1 kHz, 30% Level indication: 76 dB (6310 μV) • RV-30: Turn tuning knob fully ccw. (↺).	T201	TAPE 1 (or TAPE 2) REC jacks	Maximum output
	2-2	• AM SG: Freq.: 1650 kHz • RV-30: Turn tuning knob fully cw. (↻).	TC2		
	2-3	Repeat steps 2-1 and 2-2 until output can be increased no further.			
3. AM tracking	3-1	• AM SG: Freq.: 600 kHz Modulation: 1 kHz, 30% Level indication: Initially 76 dB (6310 μV) *See note at right. • RV-30: Tune to 600 kHz.	AM bar antenna core	TAPE 1 (or TAPE 2) REC jacks	Max. output with min. distortion Note: When adjusting, be sure to keep the signal generator output as low as possible to avoid tracking error.
	3-2	• AM SG: Freq.: 1400 kHz • RV-30: Tune to 1400 kHz.	TC1		
	3-3	Repeat 3-1 and 3-2 until best results are obtained for both frequencies.			
4. SIGNAL indicator	4-1	• AM SG: Freq.: 1000 kHz Modulation: 1 kHz, 30% Level indication: 96 dB (63,096 μV) • RV-30: Tune to 1000 kHz.	R927	SIGNAL indicator	Adjust so that the indicator light.
	4-2	• RV-30: Detune from 1000 kHz	Check		The indicator should go out.

4-5 ADJUSTMENT AND TEST POINT LOCATIONS

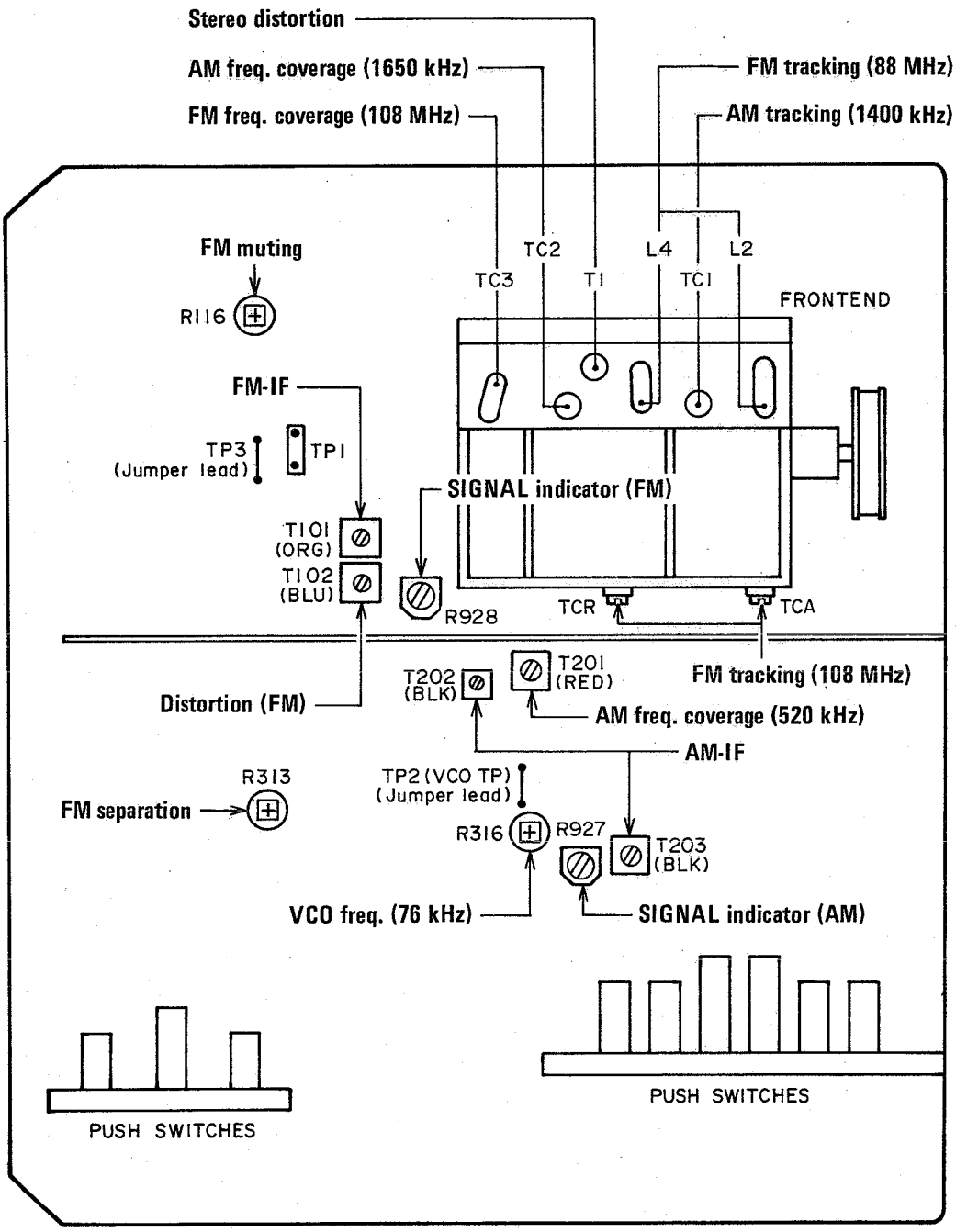


Fig. 4-3

5 BLOCK DIAGRAM

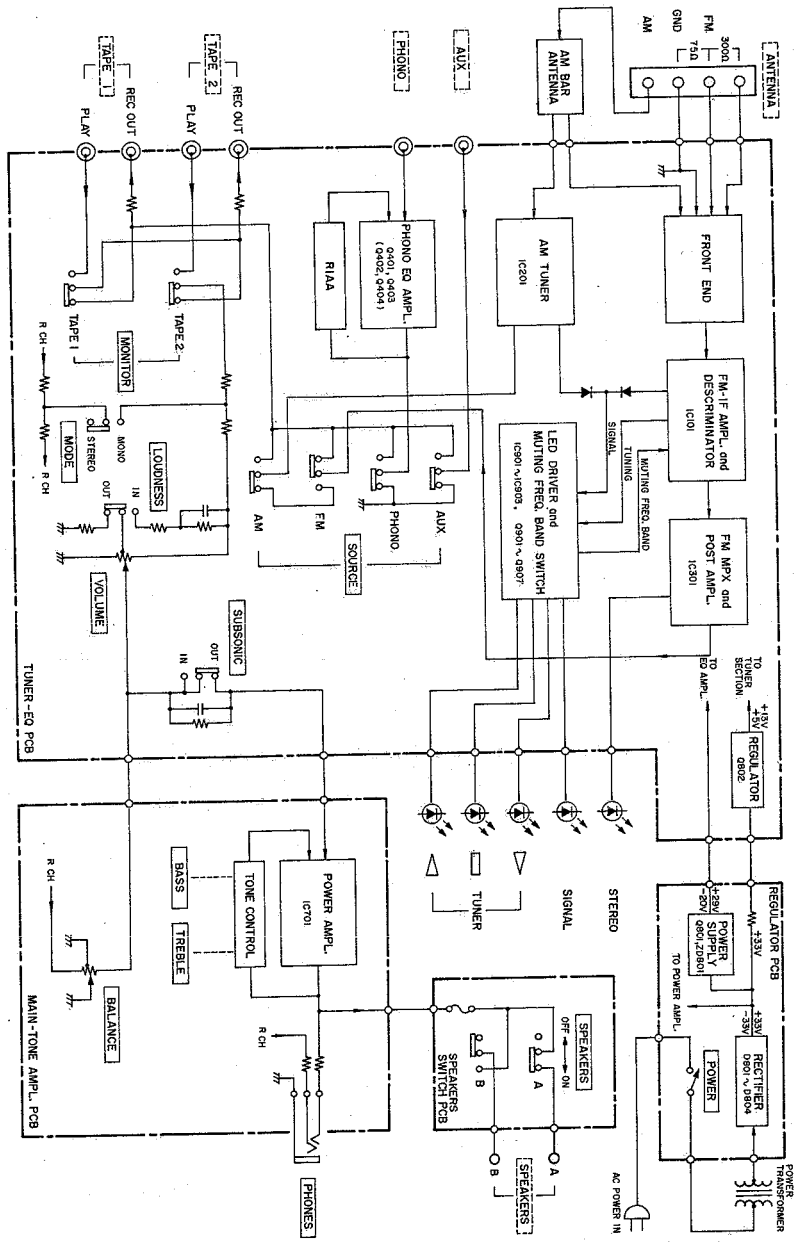
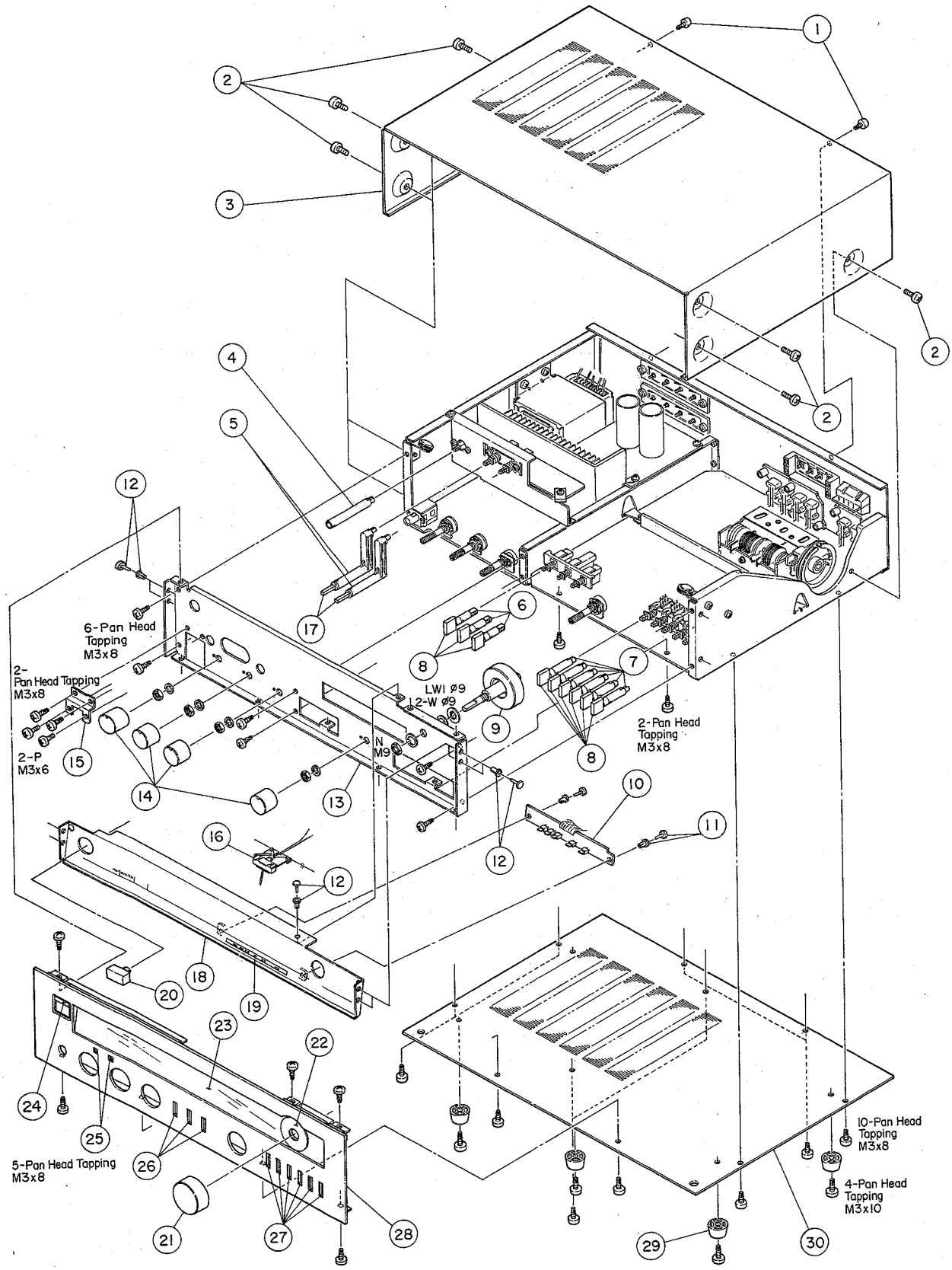


Fig. 5-1

6 EXPLODED VIEWS AND PARTS LISTS

EXPLODED VIEW-1

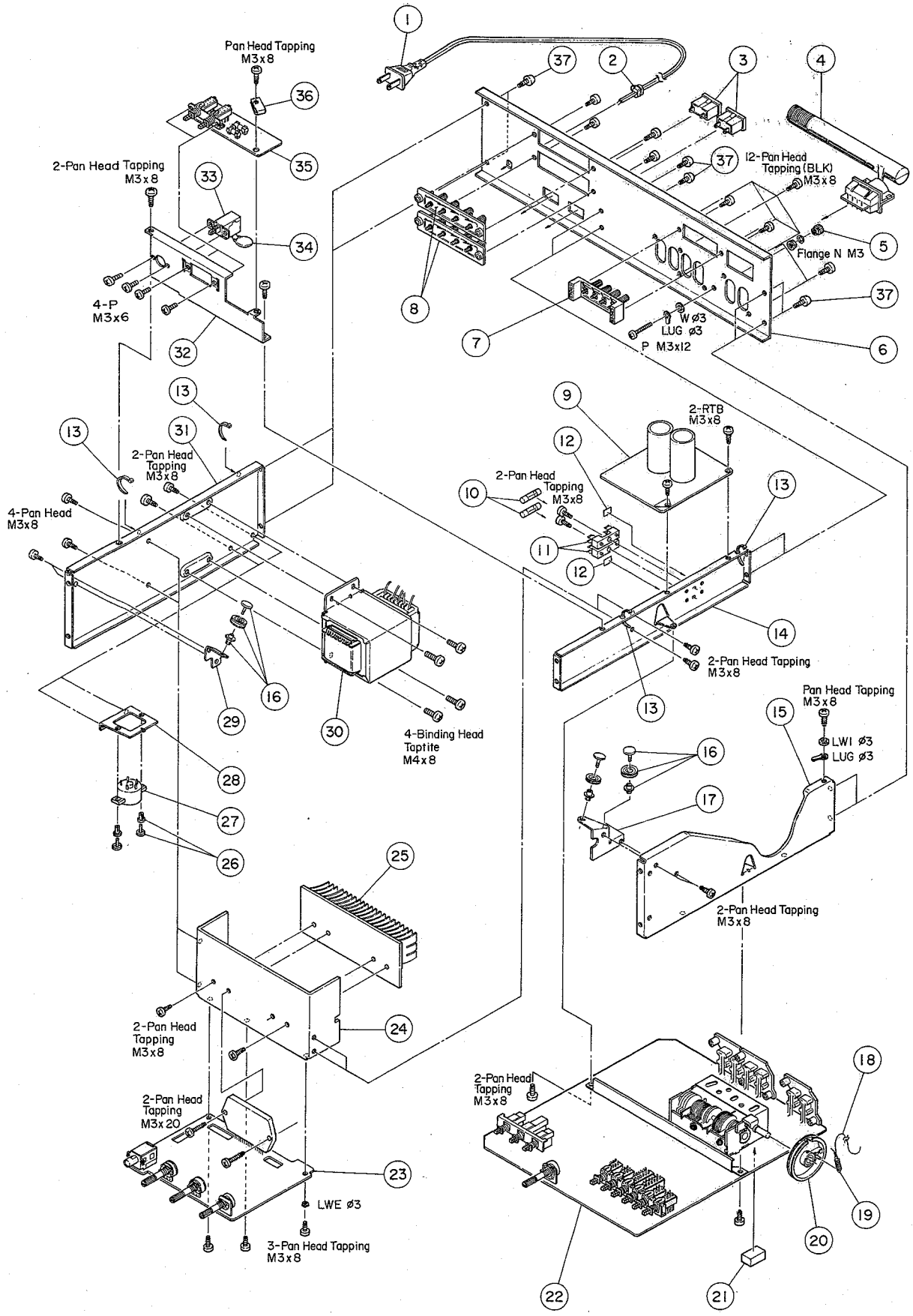


REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	5760147700	Screw, Tapping M3x8 (BLK)	
1 - 2	5760147600	Screw, Taptite M4x8 (BLK)	
1 - 3	5760128000	Cover, Top	
1 - 4	5760127900	Rod, Joint	
1 - 5	5760127600	Rod, Joint	
1 - 6	5760127800	Rod, Joint	
1 - 7	5760127700	Rod, Joint	
1 - 8	5760127400	Button, Push	
1 - 9	5760122100	Shaft, Dial	
1 - 10	5760128300	PCB Assy, LED	
1 - 11	5760147100	Push Rivet 3x5.5	
1 - 12	5760147000	Push Rivet 3x3.5	
1 - 13	5760122000	Plate, Front	
1 - 14	5760127200	Knob, VR	
1 - 15	5760122300	Bracket, PHONES Jack	
1 - 16	5760125200	Pointer, Dial	
1 - 17	5760127500	Button, Push	
1 - 18	5760122200	Plate, Dial Scale	
1 - 19	5760126800	Holder, LED	
1 - 20	5760127300	Button, Push	
1 - 21	5760127100	Knob, Tuning	
1 - 22	5760127000	Mask, Tuning	
1 - 23	5760126900	Window, Panel	
1 - 24	5760126400	Guide, Power Button	
1 - 25	5760126600	Guide, Button; 2P	
1 - 26	5760126500	Guide, Button; 3P	
1 - 27	5760126700	Guide, Button; 6P	
1 - 28	5760126300	Panel, Front	
1 - 29	5760128200	Foot	
1 - 30	5760128100	Cover, Bottom	

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	5700021600	Owner's Manual	
	5760145800	Antenna	

EXPLODED VIEW-2



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 - 1	⚠ 5760122700	Cord, AC Power [US, C, GE]	
	⚠ 5760122800	Cord, AC Power [E]	
	⚠ 5760122900	Cord, AC Power [UK]	
	⚠ 5760123000	Cord, AC Power [A]	
2 - 2	5760123100	Strain Relief, Cord [US, C]	
	5760123200	Strain Relief, Cord [All except US, C]	
2 - 3	⚠ 5760123600	Socket, AC Power [US, C, GE]	
2 - 4	5760123500	Antenna, AM Bar	
2 - 5	5760145700	Nut, GND Terminal	
2 - 6	5760122400	Panel, Front [US, C, GE]	
	5760122500	Panel, Front [E, UK, A]	
2 - 7	5760123400	Terminal, Antenna; 4P	
2 - 8	5760123300	Terminal, Speaker; 4P	
2 - 9	5760128600	PCB Assy, REGULATOR [US, C]	
	5760128610	PCB Assy, REGULATOR [All except US, C]	
2 - 10	5142174000	Fuse, F5A [All except US, C]	
2 - 11	5142087000	Holder, Fuse [All except US, C]	
2 - 12	5760124500	Label, Fuse; F5A [All except US, C]	
2 - 13	5760126100	Clamper, Cord	
2 - 14	5760123900	Angle, Center	
2 - 15	5760123800	Plate, Side; R	
2 - 16	5760124900	Pulley	
2 - 17	5760125100	Bracket, Pulley; R	
2 - 18	5760124800	String, Dial	
2 - 19	5760124700	Sprint	
2 - 20	5760124600	Drum, Dial	
2 - 21	5760145900	Cushion, Insulating	
2 - 22	5760128400	PCB Assy, TUNER-EQ [US, C]	
	5760128410	PCB Assy, TUNER-EQ [GE]	
	5760128420	PCB Assy, TUNER-EQ [E, UK, A]	
2 - 23	5760128500	PCB Assy, MAIN-TONE [US, C]	
	5760128510	PCB Assy, MAIN-TONE [All except US, C]	
2 - 24	5760132400	Heatsink, A	
2 - 25	5760132500	Heatsink, C	
2 - 26	5760147200	Push Rivet, 3x6.5	
2 - 27	5760124200	Voltage Selector	
2 - 28	5760124100	Bracket, Voltage Selector	
2 - 29	5760125000	Bracket, Pulley; L	
2 - 30	⚠ 5760125400	Transformer, Power [US, C]	
	⚠ 5760125600	Transformer, Power [GE]	
	⚠ 5760125500	Transformer, Power [E]	
	⚠ 5760125700	Transformer, Power [UK, A]	
2 - 31	5760123700	Plate, Side; L	
2 - 32	5760125800	Bracket, Switch	
2 - 33	⚠ 5760125900	Switch, Push; Power [US, C]	
	⚠ 5760126000	Switch, Push; Power [All except US, C]	
2 - 34	⚠ 5760146600	Spark Killer, 0.01μF/125V [US, C]	
	⚠ 5760146700	Spark Killer, 0.01μF/400V [All except US, C]	
2 - 35	5760128700	PCB Assy, SP SW [US, C]	
	5760128710	PCB Assy, SP SW [All except US, C]	
2 - 36	5760125300	Clip, Wire	
2 - 37	5760147500	Screw M3x8	

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA

7 PARTS LIST (PC BOARDS)

TUNER-EQ PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760128400	PCB Assy [US, C]
	5760128410	PCB Assy [GE]
	5760128420	PCB Assy [E, UK, A]
	5760129300	PCB
	5760129500	Front-END, FF116U
	IC's	
IC101	5147073000	HA11225
IC201	5147072000	HA1197C
IC301	5760130600	μPC1161C
IC901	5760131600	HA17458PS
IC902	5760131700	MSM4069RS
IC903	5760131800	MSM4081RS
	TRANSISTORS	
Q101	5760129700	2SC1675
Q401, Q402	5145117000	2SA991F
Q403, Q404	5145151000	2SC1815
Q802	5231755200	2SD880GR
Q901~Q907	5145151000	2SC1815
	DIODES	
D101~D103	5760129800	1SS53
ZD802	5760131300	Zener, RD13EB3
ZD803	5760131400	Zener, RD5.1EB2
D901	5760129800	1SS53
D902	5760131900	1N34
D903~D905	5760129800	1SS53
	CARBON RESISTORS All resistors are rated ±5% tolerance and ¼ watt unless otherwise noted.	
R101	5181246000	33Ω
R102	5181296000	3.9kΩ
R103	5181272000	390Ω
R104	5181270000	330Ω
R105	5181278000	680Ω
R106	5181270000	330Ω
R107	5181322000	47kΩ
R108	5181294000	3.3kΩ
R109	5181324000	56kΩ
R111	5181270000	330Ω
R112	5181290000	2.2kΩ
R113	5181310000	15kΩ
R114	5181290000	2.2kΩ
R115	5181306000	10kΩ
R117	5181346000	470kΩ
R118	5181250000	47Ω
R201	5181266000	220Ω
R202	5181286000	1.5kΩ
R203	5181294000	3.3kΩ
R204, R205	5181306000	10kΩ
R206	5181270000	330Ω
R207	5181839000	47Ω Nonflammable
R209	5182002000	150Ω Nonflammable
R210	5181282000	1kΩ
R211	5181304000	8.2kΩ
R301	5181324000	56kΩ
R302	5181840000	47Ω Nonflammable
R303, R304	5181314000	22kΩ

REF. NO.	PARTS NO.	DESCRIPTION
R305, R306	5181320000	39kΩ [US, C, GE]
	5181322000	47kΩ [E, UK, A]
R307, R308	5181306000	10kΩ
R309, R310	5181286000	1.5kΩ
R311, R312	5181292000	2.7kΩ
R314	5181282000	1kΩ
R315	5181310000	15kΩ
R317	5181306000	10kΩ
R401, R402	5181330000	100kΩ
R403, R404	5181262000	150Ω
R405, R406	5181330000	100kΩ
R407, R408	5181306000	10kΩ
R409, R410	5181310000	15kΩ
R411, R412	5181294000	3.3kΩ
R413, R414	5181270000	330Ω
R415, R416	5181268000	270Ω
R417, R418	5181308000	12kΩ
R419, R420	5181336000	180kΩ
R421, R422	5181274000	470Ω
R423, R424	5181330000	100kΩ
R431, R432	5181276000	560Ω
R433	5181322000	47kΩ
R501, R502	5181290000	2.2kΩ
R503, R504	5181316000	27kΩ
R505, R506	5181354000	1MΩ
R507, R508	5181314000	22kΩ
R509, R510	5181290000	2.2kΩ
R737, R738	5181354000	1MΩ
R809	5181660000	560Ω Nonflammable
R901	5181282000	1kΩ
R902~R907	5181330000	100kΩ
R908	5181314000	22kΩ
R909	5181282000	1kΩ
R910, R911	5181306000	10kΩ
R912, R913	5181350000	680kΩ
R914, R915	5181362000	2.2MΩ
R916, R917	5181330000	100kΩ
R918	5181362000	2.2MΩ
R919	5181330000	100kΩ
R920	5760135500	10MΩ
R921	5181282000	1kΩ
R922	5181330000	100kΩ
R923~R925	5181310000	15kΩ
R926	5181282000	1kΩ
R929	5181354000	1MΩ
R930	5181306000	10kΩ
R931	5181274000	470Ω
R932, R933	5181322000	47kΩ
	CAPACITORS	
C101	5173394000	Ceramic 0.022μF 50V
C102	5173395000	Ceramic 0.047μF 50V
C103	5173394000	Ceramic 0.022μF 50V
C104	5172900000	Elec. 10μF 16V
C105~C107	5173394000	Ceramic 0.022μF 50V
C108	5172894000	Elec. 4.7μF 25V
C109	5172312000	Celamic 100pF 50V
C110	5173394000	Celamic 0.022μF 50V
C111	5172900000	Elec. 10μF 16V
C112	5172882000	Elec. 1μF 50V

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA

REF. NO.	PARTS NO.	DESCRIPTION		
C113	5173394000	Ceramic	0.022μF	50V
C114	5172900000	Elec.	10μF	16V
C116	5173394000	Ceramic	0.022μF	50V
C117	5172882000	Elec.	1μF	50V
C118	5173395000	Ceramic	0.047μF	50V
C119~C122	5173394000	Ceramic	0.022μF	50V
C123	5173395000	Ceramic	0.047μF	50V
C125	5172882000	Elec.	1μF	50V
C202	5172302000	Ceramic	15pF	50V
C203	5173394000	Ceramic	0.022μF	50V
C204	5173430000	Ceramic	0.001μF	50V
C205, C206	5173394000	Ceramic	0.022μF	50V
C207	5172310000	Ceramic	68pF	50V
C208, C209	5173394000	Ceramic	0.022μF	50V
C210	5172894000	Elec.	4.7μF	25V
C211	5172890000	Elec.	3.3μF	35V
C212	5173430000	Ceramic	0.001μF	50V
C213	5173394000	Ceramic	0.022μF	50V
C214	5172943000	Elec.	220μF	16V
C215	5172925000	Elec.	47μF	16V
C216	5054829000	Mylar	0.022μF	100V
C217	5172880000	Elec.	0.47μF	50V
C218	5173435000	Ceramic	0.047μF	50V
C219	5172300000	Ceramic	10pF	50V
C301	5172900000	Elec.	10μF	16V
C302	5172934000	Elec.	100μF	16V
C305, C306	5054876800	Mylar	0.0022μF	100V [US, C, GE]
	5054886800	Mylar	0.0012μF	100V [E, UK, A]
C307, C308	5172900000	Elec.	10μF	16V
C309, C310	5172882000	Elec.	1μF	50V
C311, C312	5054893800	Mylar	0.0068μF	100V
C313	5054666000	Dip. Tant.	0.22μF	35V
C314	5054670000	Dip. Tant.	1μF	35V
C315	5054673000	Dip. Tant.	3.3μF	35V
C316	5172616000	Polyst.	470pF	50V
C317	5054738800	Mylar	0.047μF	100V
C318	5172320000	Ceramic	470pF	50V
C319, C320	5054877800	Mylar	0.01μF	100V [US, C, GE]
	5054893800	Mylar	0.0068μF	100V [E, UK, A]
C321, C322	5172616000	Polyst.	470pF	50V
C401, C402	5172880000	Elec.	0.47μF	50V
C403, C404	5173417000	Ceramic	220pF	50V
C405, C406	5173414000	Ceramic	56pF	50V
C407, C408	5172941000	Elec.	220μF	6.3V
C409, C410	5172916000	Elec.	33μF	16V
C411, C412	5054893800	Mylar	0.0068μF	100V
C413, C414	5054898800	Mylar	0.022μF	100V
C415, C416	5173476800	Elec.	1μF	50V
C419, C420	5172926000	Elec.	47μF	25V
C421	5172900000	Elec.	10μF	16V
C501, C502	5173419000	Ceramic	150pF	50V
C503, C504	5173393000	Ceramic	0.01μF	50V
C729, C730	5054926800	Mylar	0.068μF	100V
C807, C808	5172943000	Elec.	220μF	16V
C809	5172900000	Elec.	10μF	16V
C901	5172890000	Elec.	3.3μF	35V

REF. NO.	PARTS NO.	DESCRIPTION
		VARIABLE RESISTORS
R116	5053352000	Semi-fixed 47kΩ (B)
R313	5053365000	Semi-fixed 470kΩ (B)
R316	5053348000	Semi-fixed 10kΩ (B)
R927, R928	5053348000	Semi-fixed 10kΩ (B)
VR501	5760132200	250kΩ (B) x 2
		COILS/TRANSFORMER
L101, L102	5760130200	2.2μH
L103	5760130100	22μH
T101	5760129900	FM DET (1)
T102	5760130000	FM DET (2)
T201	5760130800	AM OSC
T202	5760130900	AM IFT
T203	5760131000	AM DET
L301, L302	5760130700	39μH
		MISCELLANEOUS
CF101, CF102	5760130300	Ceramic Filter (Red)
CF201	5760131100	Ceramic Filter, AM
	5760141800	Pin Jack, 4P (3 used)
	5760129400	Stay, PCB
	5760129600	Plate, Shield; FE
	5122424000	Pin, Lapping; 2P (3 used)
	5122427000	Pin, Lapping; 5P
	5760131200	Heatsink
	5760131500	Connector
SW6~SW11	5760132000	Switch, Push; 6-gang
SW4, 5, 12	5760132100	Switch, Push; 3-gang

LED PCB ASSY (PC Board omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5760128300	PCB Assy
	5760128900	PCB
	5760129000	LED, TLG205 (2 used)
	5760129100	LED, TLY205 (2 used)
	5760129200	LED, TLR205
	5760126800	Holder, LED
	5760187600	Wire, Ribbon

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA

MAIN-TONE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760128500	PCB Assy [US, C]
	5760128510	PCB Assy [All except US, C]
	5760132300	PCB
	IC	
IC701	5760132900	STK-465A
	RESISTORS	**All resistors are rated ±5% tolerance, ¼ watt and are carbon type unless otherwise noted.**
R701, R702	5181282000	1kΩ
R703, R704	5181328000	82kΩ
R705, R706	5184293000	0.33Ω 2W Cement
R707, R708	⚠5181294000	3.3kΩ Nonflammable
R709, R710	⚠5181282000	1kΩ Nonflammable
R711, R712	5181282000	1kΩ
R713, R714	5181328000	82kΩ
R715, R716	5181292000	2.7kΩ
R717, R718	5181278000	680Ω
R719, R720	5181330000	100kΩ
R721, R722	5181276000	560Ω
R723, R724	5181310000	15kΩ
R725, R726	5181292000	2.7kΩ
R727, R728	5181310000	15kΩ
R731, R732	⚠5184684000	10Ω 1W Metal Film Nonflammable
R733, R734	⚠5184597000	330Ω 1W Metal Film Nonflammable
R735	⚠5181258000	100Ω
	CAPACITORS	
C701, C702	5172882000	Elec. 1μF 50V
C703, C704	5172316000	Ceramic 220pF 50V
C705, C706	5172927000	Elec. 47μF 35V
C707, C708	5173397000	Ceramic 2pF 50V
C709, C710	5172925000	Elec. 47μF 16V
C711, C712	5171484000	Elec. 10μF 50V (BP)
C713, C714	5070392000	Mylar 0.0047μF 100V
C715, C716	5054833000	Mylar 0.027μF 100V
C717, C718	5054855000	Mylar 0.018μF 100V
C719, C720	5170519000	Mylar 0.1μF 100V
C721, C722	5172900000	Elec. 10μF 16V
C725	5172937000	Elec. 100μF 50V
C726, C727	5054829000	Mylar 0.022μF 100V
C728	5172320000	Ceramic 470pF 50V
C731, C732	5172319000	Ceramic 390pF 50V
C733, C734	5054845000	Mylar 0.0022μF 100V
C735, C736	5172310000	Ceramic 68pF 50V
	VARIABLE RESISTORS	
VR701	5760133000	250kΩ
VR702, 703	5760133100	100kΩ (C) x 2
	COILS	
L701, L702	5760133000	Choke
	MISCELLANEOUS	
	5760133200	Jack, PHONES
	5760132400	Heatsink, A
	5760132500	Heatsink, C
	5122424000	Pin, Lapping; 2P

REGULATOR PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760128600	PCB Assy [US, C]
	5760128610	PCB Assy [All except US, C]
	5760133500	PCB [US, C]
	5760133600	PCB [All except US, C]
	TRANSISTOR	
Q801	5145153000	2SC2240
	DIODES	
D801~D804	5760133900	GP25D-L
ZD801	5760134000	Zener RD20EB1
	RESISTORS	**All resistors are rated ±5% tolerance, ¼ watt and are carbon type unless otherwise noted.**
R801	⚠5052704000	2.2kΩ 1W Metal Film Nonflammable
R802	⚠5052708000	470Ω 1W Metal Film Nonflammable
R803	5181266000	220Ω
R804	5181330000	100kΩ
R805	⚠5181292000	2.7kΩ
R806	⚠5184588000	100Ω 1W Metal Film Nonflammable
R807, R808	⚠5760135200	2.7kΩ 1W Metal Film Nonflammable
R1	⚠5180159000	2.2MΩ ½W [US, C]
	CAPACITORS	
C801	5054223000	Ceramic 0.01μF 500V
C802, C803	5760135100	Elec. 6800μF 45V
C804	5172936000	Elec. 100μF 35V
C805	5172935000	Elec. 100μF 25V
C806	5172927000	Elec. 47μF 35V
	MISCELLANEOUS	
F801	⚠5142189000	Fuse 2A 250V
	5760133700	Holder, Fuse (2 used)
	5760133800	Plate, GND
	5122430000	Pin, Lapping; 2P (3 used)
	5122433000	Pin, Lapping; 5P
	5122434000	Pin, Lapping; 6P

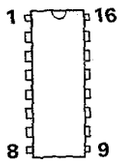
SPEAKERS SWITCH PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760128700	PCB Assy [US, C]
	5760128710	PCB Assy [All except US, C]
	5760134100	PCB [US, C]
	5760134200	PCB [All except US, C]
SW2, SW3	5760134300	Push Switch, 2-gang
R729, R730	⚠5184676000	Res. 4.7Ω 1W Metal Film Nonflammable
R810	⚠5052713000	Res. 330Ω 2W Metal Film Nonflammable
C723, C724	5170519000	Cap. 0.1μF 100V Mylar
F201, F202	⚠5142191000	Fuse, 3.0A 125V [US, C]
	⚠5142190000	Fuse, T2.5A 250V [All except US, C]
	5142087000	Holder, Fuse
	5122426000	Pin, Lapping; 4P
	5122430000	Pin, Lapping; 2P
	5122433000	Pin, Lapping; 5P

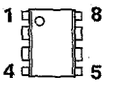
[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA

SEMICONDUCTOR ELECTRODES

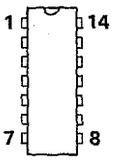
HA11225
HA1197C
(TOP VIEW)



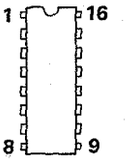
HA17458PS
(TOP VIEW)



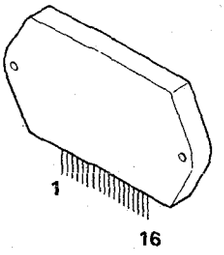
MSM4069RS
MSM4081RS
(TOP VIEW)



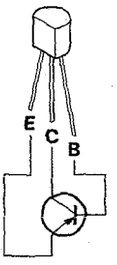
μPC1161C
(TOP VIEW)



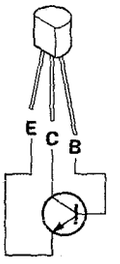
STK465A



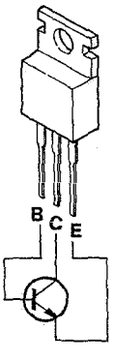
2SA991F



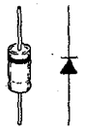
2SC1675
2SC1815
2SC2240



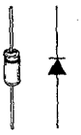
2SD880GR



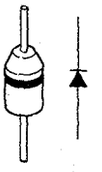
1N34



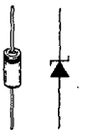
1SS53



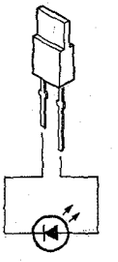
GP25D-L



RD5.1EB2
RD13EB3
RD20EB1

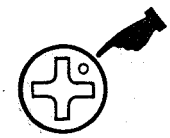


TLG205
TLR205
TLY205



ASSEMBLING HARDWARE CODING LIST

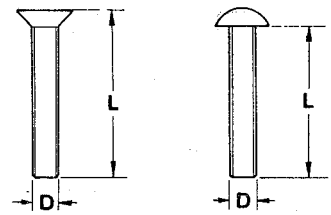
All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted. ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:

B M 3 x 6

- B — Nomenclature
- M — Metric System
- 3 — Diameter in mm (D) *
- 6 — Length in mm (L)

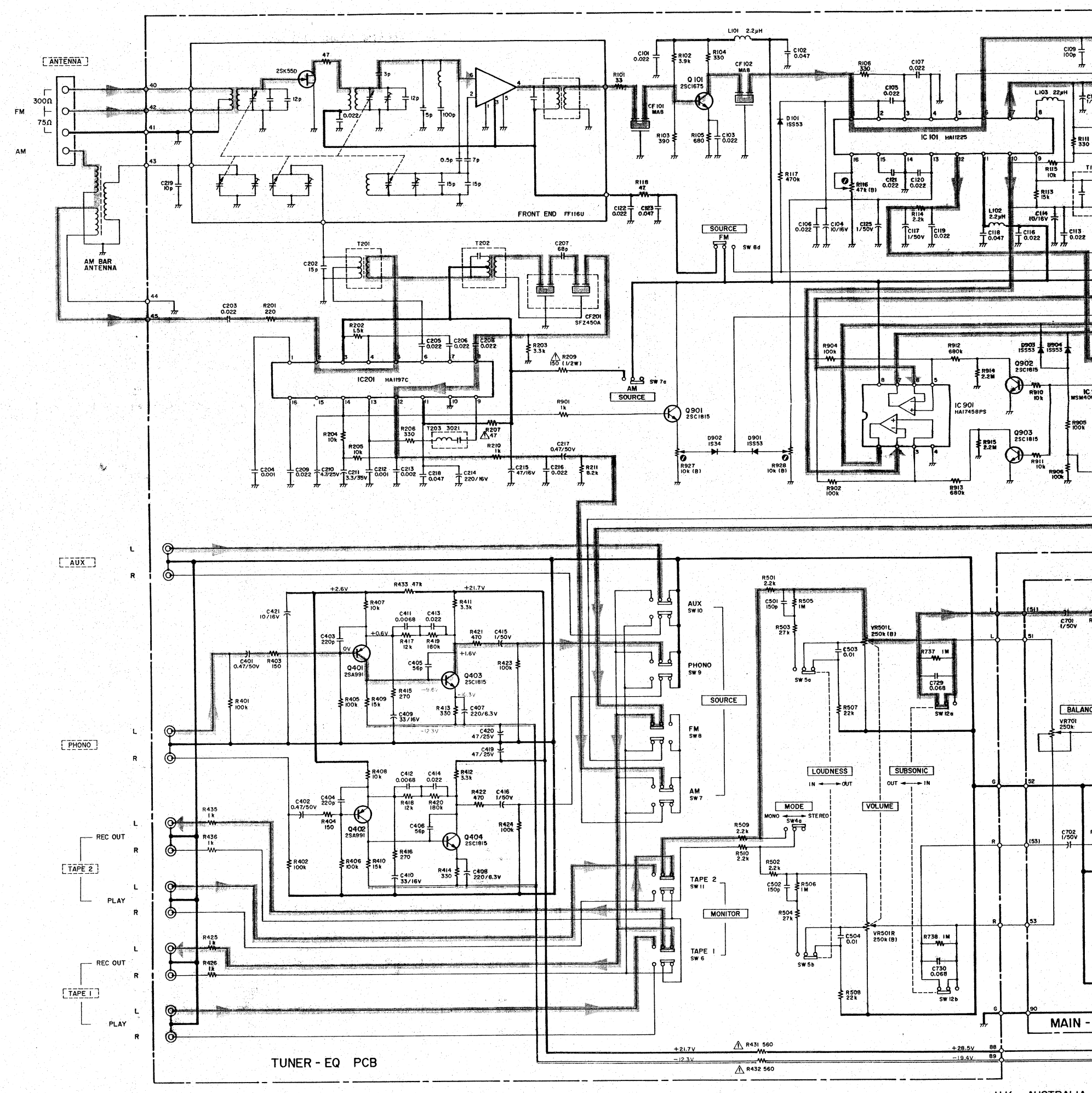


* Inner dia. for washers and nuts

	Code	Name	Type
MACHINE SCREW	R	Round Head Screw	
	P	Pan Head Screw	
	T	Stove Head Screw (Truss)	
	B	Binding Head Screw	
	F	Flat Countersunk Head Screw	
	O	Oval Countersunk Head Screw	
WOOD SCREW	RW	Round Head Wood Screw	
TAPTITE SCREW	PTT	Pan Head Taptite Screw	
	WTT	Washer Head Taptite Screw	
SEMS SCREW	BSA	Binding Head SEMS Screw(A Type)	
	BSB	Binding Head SEMS Screw(B Type)	
	BSF	Binding Head SEMS Screw(F Type)	
	PSA	Pan Head SEMS Screw(A Type)	
	PSB	Pan Head SEMS Screw(B Type)	

	Code	Name	Type
TAPPING SCREW	BTA	Binding Head Tapping Screw(A Type)	
	BTB	Binding Head Tapping Screw(B Type)	
	RTA	Round Head Tapping Screw(A Type)	
	RTB	Round Head Tapping Screw(B Type)	
SETSCREW	SF	Hex Socket Setscrew(Flat Point)	
	SC	Hex Socket Setscrew(Cup Point)	
	SS	Slotted Socket Setscrew(Flat Point)	
WASHER	E	E-Ring (Retaining Washer)	
	W	Flat Washer (Plain)	
	SW	Lock Washer (Spring)	
	LWI	Lock Washer (Internal Teeth)	
	LWE	Lock Washer (External Teeth)	
	TW	Trim Washer (Countersunk)	
NUT	N	Hex Nut	

TEAC SCHEMATIC DIAGRAM RV-30



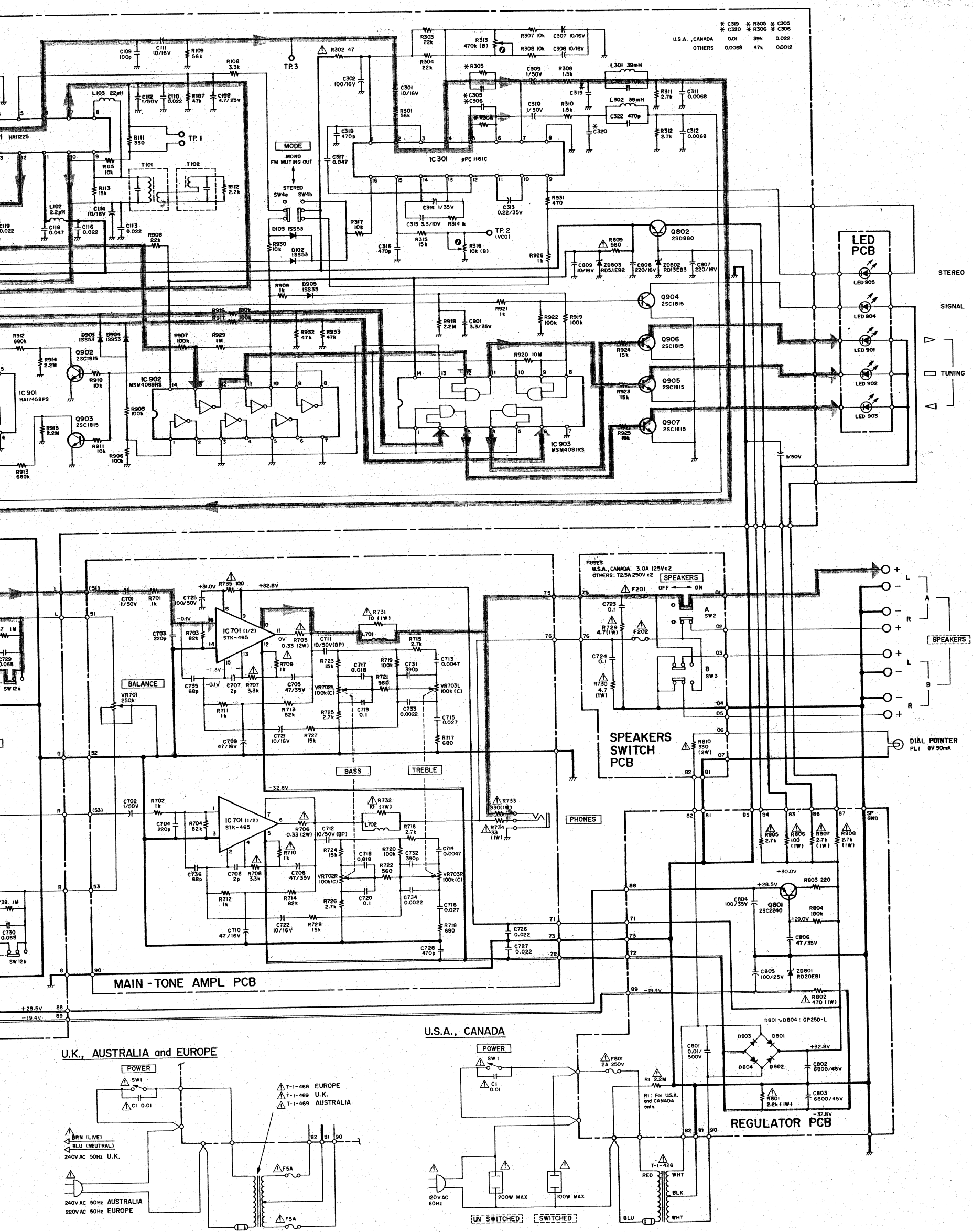
FM reception mode: 83 MHz
1 kHz 100% modulation (mono)
ANT input: 1000 μV

AM reception mode: 1000 kHz
1 kHz 30% modulation
ANT input: 5000 μV

Voltages in each section

(Unit: V

	FM	AM		FM	AM		FM	AM		FM	AM		FM	AM		FM	AM		FM	AM		FM	AM
Q101 E	0.5	0.5	Q904 E	0	0	IC101 1	2.1	2.5	IC201 1	0	4.9	IC301 1	12.0	12.0	IC901 1	1.8	12.4	IC902 1	0.7	5.6	IC903 1	0.6	0.6
C	12.8	12.8	C	0	4.1	2	2.1	2.5	2	0	2.2	2	2.5	2.5	2	5.6	5.6	2	5.0	0	2	5.0	0
B	1.2	1.2	B	0.7	0.6	3	2.1	2.5	3	0.4	11.3	3	5.9	5.9	3	4.9	5.4	3	0	0	3	0	0
Q802 E	13.1	13.1	Q905 E	0	0	4	0	0	4	0.4	9.1	4	9.8	9.8	4	0	0	4	5.0	5.0	4	0	0
C	27.5	26.1	C	0	30.4	5	0	3.0	5	0.4	11.3	5	9.8	9.8	5	4.9	5.2	5	0	0	5	5.0	0
B	13.6	13.6	B	0.7	0	6	5.5	5.6	6	0	3.6	6	5.0	5.0	6	5.7	5.8	5	5.0	5.0	6	0.6	4.0
			Q906 E	0	0	7	5.7	5.9	7	0	1.3	7	5.0	5.0	7	1.8	1.8	7	0	0	7	0	0
Q901 E	0	1.4	C	0.8	30.4	8	5.6	5.6	8	0.4	2.8	8	0	0	8	13.1	13.1	8	4.7	0	8	0	4.4
C	0.4	10.9	B	0	0	9	5.6	5.6	9	0	8.3	9	12.9	13.1				9	0	5.0	9	0	4.4
B	0	2.0	Q907 E	0	0	10	5.6	5.6	10	0	0	10	2.6	2.6				10	0	5.0	10	0	5.0
Q902 E	0	0	C	0.8	30.4	11	13.1	13.1	11	0.4	11.0	11	2.6	2.6				11	5.0	0	11	4.8	0
C	0	3.9	B	0	0	12	0.3	5.1	12	0	2.2	12	2.6	2.6				12	5.0	0	12	5.0	0
B	0.7	0				13	5.0	0	13	0	0.7	13	2.6	2.6				13	0.6	5.0	13	5.0	0
Q903 E	0	0				14	0	0	14	0	2.1	14	2.6	2.6				14	5.0	5.0	14	5.0	5.0
C	0	4.1				15	1.0	5.0	15	0	0.2	15	3.4	0									
B	0.7	0				16	4.0	3.9	16	0.6	1.0	16	0	7.8									



(Unit: V)

	AM		FM	AM
	5.6	IC903 1	0.6	0.6
	0	2	5.0	0
	0	3	0	0
	5.0	4	0	0
	0	5	5.0	0
	5.0	6	0.6	4.0
	0	7	0	0
	0	8	0	4.4
	5.0	9	0	4.4
	5.0	10	0	5.0
	0	11	4.8	0
	0	12	5.0	0
	5.0	13	5.0	0
	5.0	14	5.0	5.0

NOTES

1. All resistors are ¼ W, ±5%, unless otherwise noted. Resistor values are in ohms (k = kilo-ohms, M = mega-ohms).
2. All capacitor values are in microfarads (p = picofarads).
3. ——— : +B power supply circuit.
4. ——— : –B power supply circuit.
5. ▰▰▰ : Signal path.
6. ▭ : Front panel indication.
7. ┈┈┈ : Rear panel indication.
8. ⚠ Parts marked with this sign are safely critical components. They must always be replaced with identical components — refer to the appropriate parts list and ensure exact replacement.

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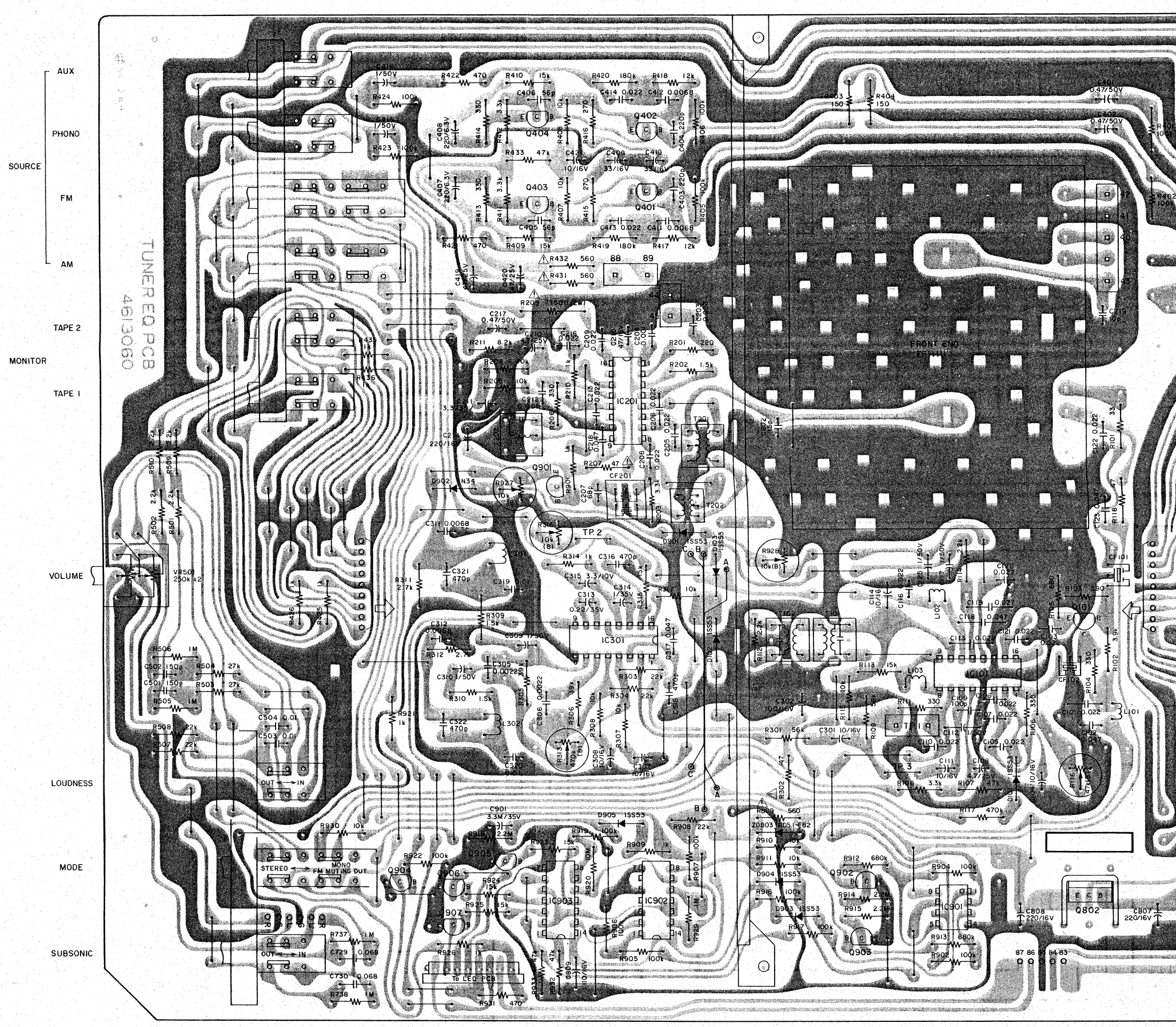
AM/FM Stereo Receiver

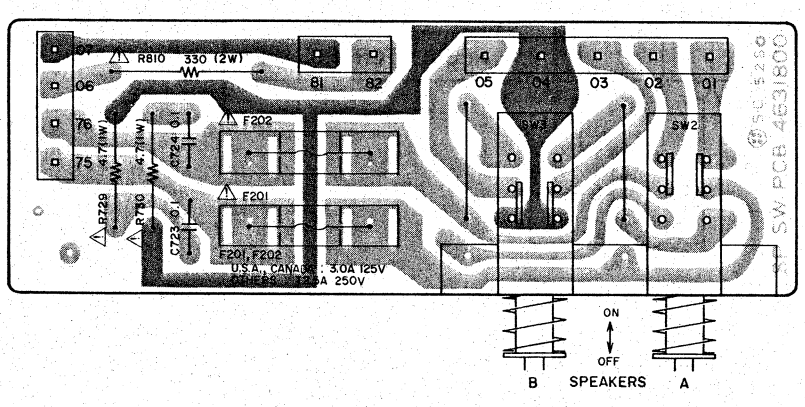
PC BOARDS

PC Boards shown viewed from foil side.

TUNER-EQ PCB ASSY



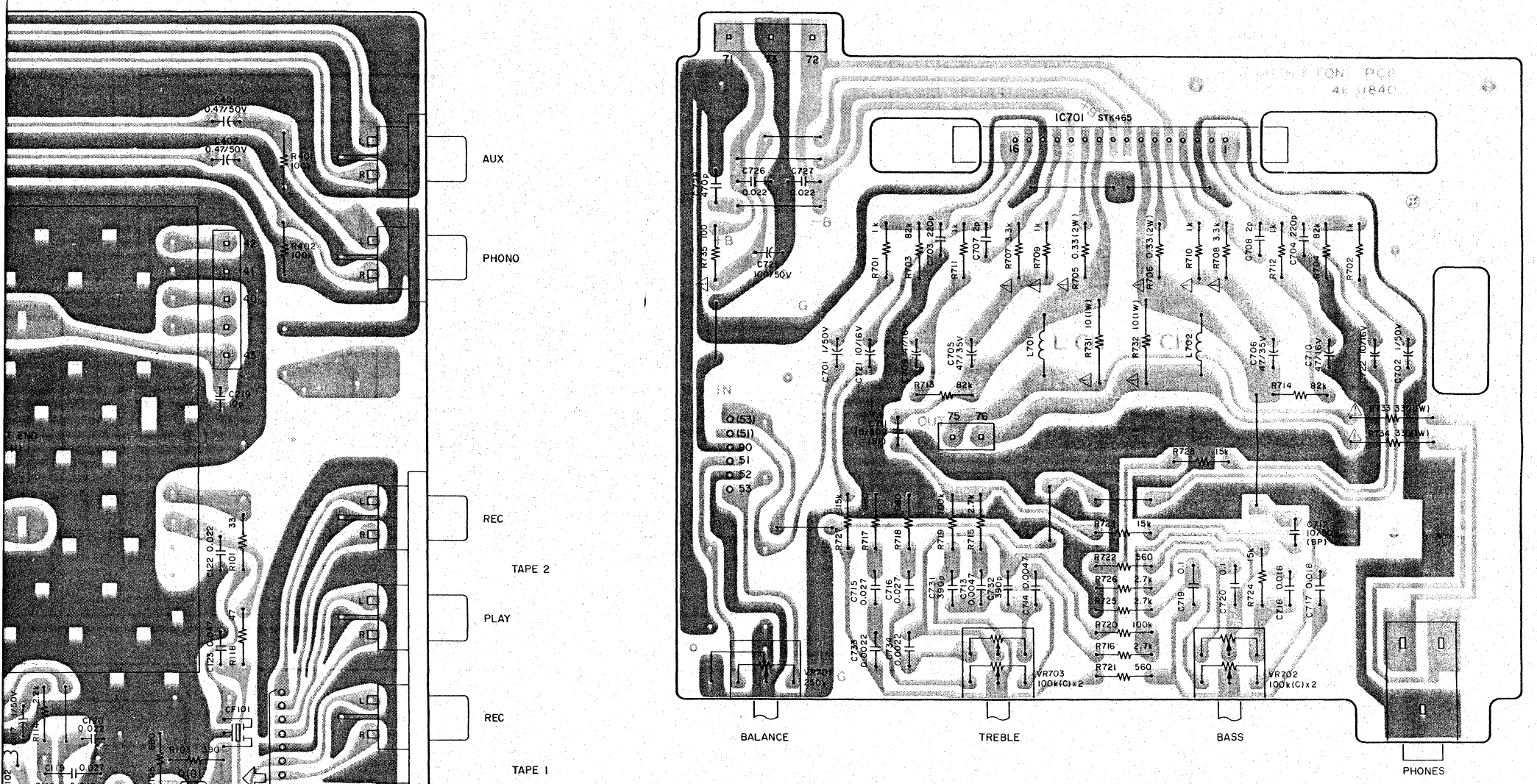
SPEAKERS SWITCH PCB ASSY



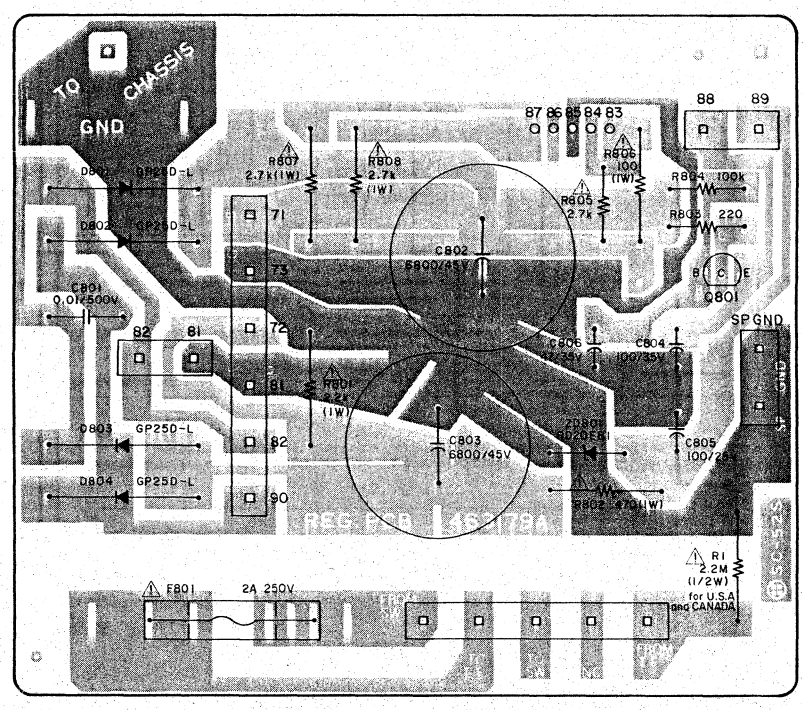
NOTES

1. The colors used on the PCB illustrations have the following sig
   cance:
   - : +B power supply circuit
   - : –B power supply circuit
   - : GND
   - : Other
2. All resistors are ¼ watt, ±5%, unless otherwise noted. Reistor va
   are in ohms (k = kilo-ohms, M = mega-ohms).
3. All capacitor values are in microfarads (p = picofarads).
4. ⚠ Parts marked with this sign are safety critical components.
   They must always be replaced with identical components — refe
   the appropriate parts list and ensure exact replacement.

MAIN-TONE PCB ASSY



REGULATOR PCB ASSY



the PCB illustrations have the following signifi-

supply circuit
supply circuit

watt, ±5%, unless otherwise noted. Reistor values
-ohms, M = mega-ohms).
are in microfarads (p = picofarads).
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list and ensure exact replacement.

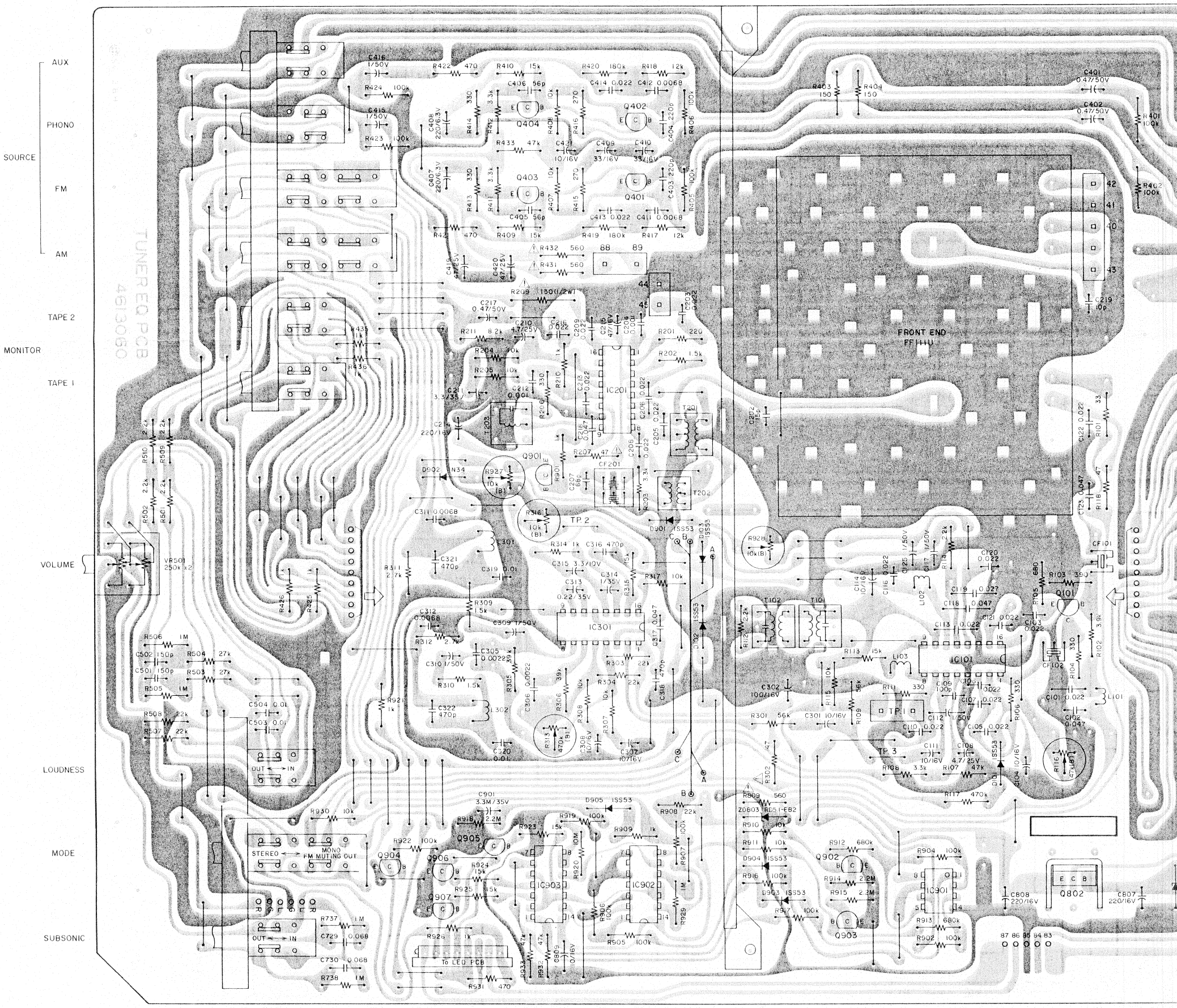
RV-30

AM/FM Stereo Receiver

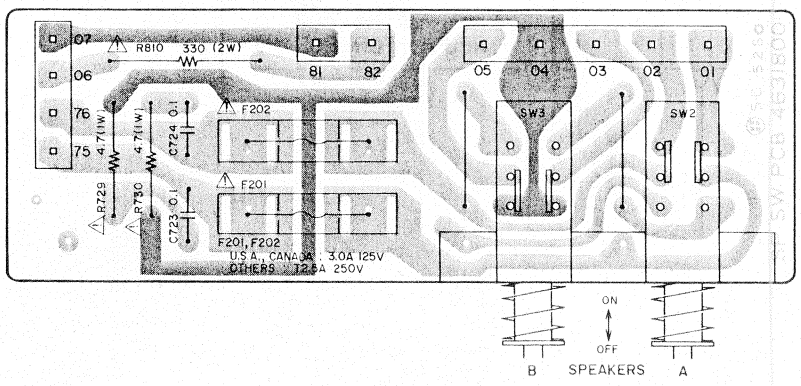
PC BOARDS

PC Boards shown viewed from foil side.

TUNER-EQ PCB ASSY



SPEAKERS SWITCH PCB ASSY



NOTES

1. The colors used on the PCB illustrations have the following significance:
   - : +B power supply circuit
   - : –B power supply circuit
   - : GND
   - : Other
2. All resistors are ¼ watt, ±5%, unless otherwise noted. Reistor values are in ohms (k = kilo-ohms, M = mega-ohms).
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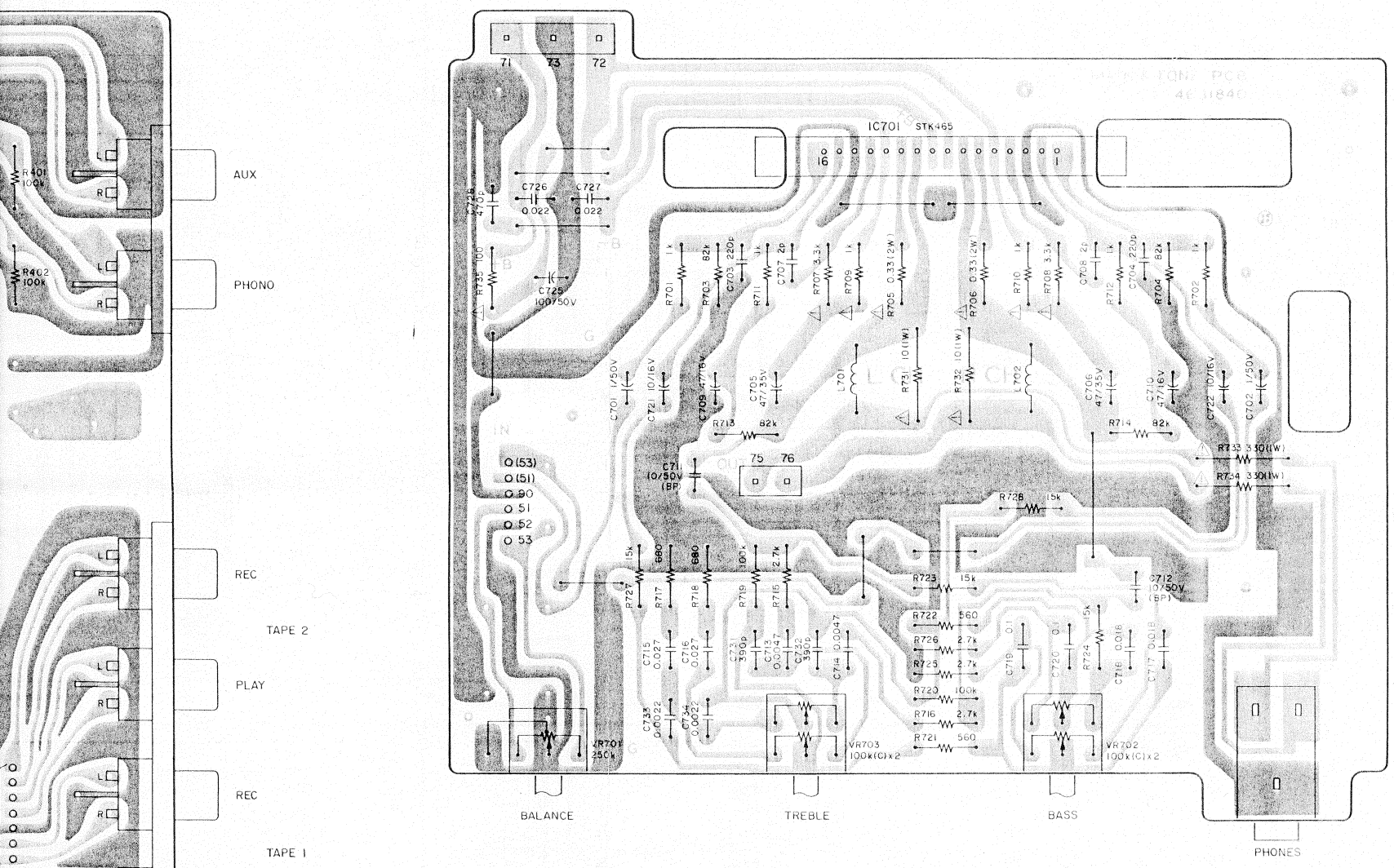
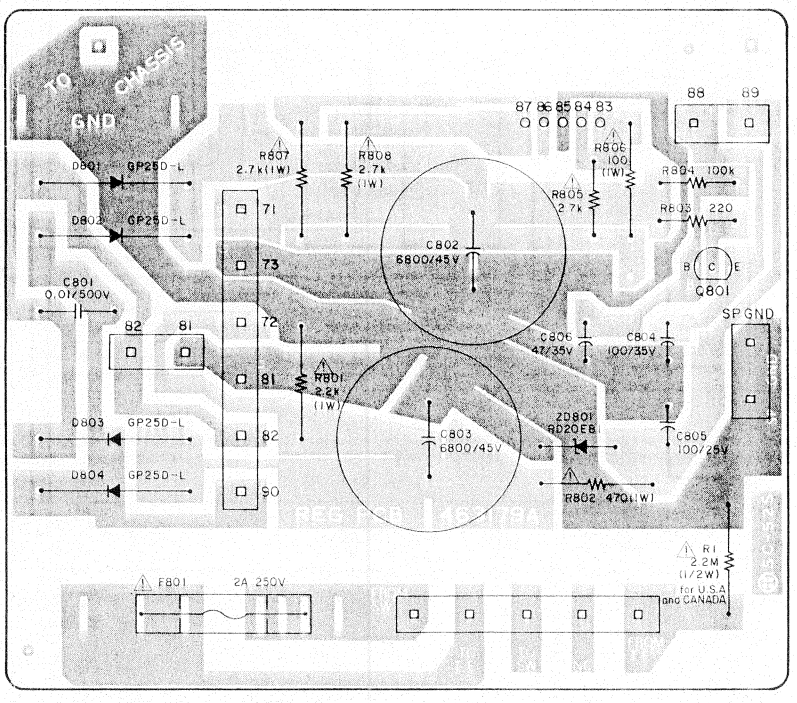
MAIN-TONE PCB ASSY



REGULATOR PCB ASSY



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AM/FM Stereo Receiver